

Title (en)  
METHOD AND APPARATUS FOR CONTROLLING DATA STREAM IN STORAGE DEVICE, STORAGE DEVICE, AND STORAGE MEDIUM

Title (de)  
VERFAHREN UND VORRICHTUNG ZUR STEUERUNG DES DATENSTROMS IN EINER SPEICHERVORRICHTUNG,  
SPEICHERVORRICHTUNG UND SPEICHERMEDIUM

Title (fr)  
PROCÉDÉ ET APPAREIL DE COMMANDE DE FLUX DE DONNÉES DANS UN DISPOSITIF DE STOCKAGE, DISPOSITIF DE STOCKAGE ET  
SUPPORT DE STOCKAGE

Publication  
**EP 3757747 A1 20201230 (EN)**

Application  
**EP 19767126 A 20190114**

Priority  
• CN 201810220839 A 20180316  
• CN 2019071515 W 20190114

Abstract (en)  
The present invention provides a method and an apparatus for controlling a data flow in a storage device, a storage device, and a storage medium, and relates to the field of network communications technologies. The method for controlling the data flow in the storage device is applied to a host, and includes: obtaining a cache input and output parameter, where the cache input and output parameter includes a cache water mark, and the cache water mark is used to indicate a proportion of an amount of data stored in a cache to a cache capacity; determining whether the cache input and output parameter meets an overload condition, where the overload condition includes that: the cache water mark is higher than a first water mark threshold; when the cache input and output parameter meets the overload condition, obtaining a first bandwidth value, where the first bandwidth value is less than a current flushing bandwidth value of the cache; determining a quantity of tokens based on the first bandwidth value; and controlling the data flow in the storage device by using the quantity of tokens. The technical solution of the present invention can alleviate an overloaded state of the cache in the storage device and improve performance of the storage device.

IPC 8 full level  
**G06F 3/06** (2006.01); **H04L 12/801** (2013.01)

CPC (source: CN EP US)  
**G06F 3/0613** (2013.01 - CN EP); **G06F 3/0656** (2013.01 - CN EP); **G06F 3/0659** (2013.01 - EP); **G06F 3/067** (2013.01 - CN);  
**G06F 3/0683** (2013.01 - EP); **G06F 9/30047** (2013.01 - US); **G06F 9/5016** (2013.01 - US); **G06F 11/3037** (2013.01 - US);  
**G06F 12/0828** (2013.01 - US); **G06F 12/0831** (2013.01 - US); **G06F 12/0868** (2013.01 - EP); **G06F 12/0891** (2013.01 - US);  
**G06F 2209/5022** (2013.01 - US); **G06F 2209/508** (2013.01 - US); **G06F 2212/1016** (2013.01 - EP); **G06F 2212/312** (2013.01 - EP);  
**G06F 2212/7203** (2013.01 - EP)

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3757747 A1 20201230**; **EP 3757747 A4 20210331**; **EP 3757747 B1 20230308**; CN 110275670 A 20190924; CN 110275670 B 20210205;  
US 11734183 B2 20230822; US 2020409858 A1 20201231; WO 2019174391 A1 20190919

DOCDB simple family (application)  
**EP 19767126 A 20190114**; CN 201810220839 A 20180316; CN 2019071515 W 20190114; US 202017021385 A 20200915